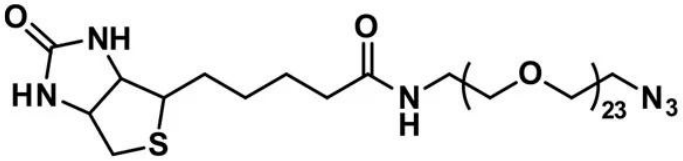
www.vectorlabs.com
e: customerservice@vectorlabs.com
t: (650) 697-3600

BIOTIN-DPEG®$_{23}$-AZIDE

SKU: QBD-10787



Biotin-dPEG®23-azide, product number QBD-10787, is a water-soluble biotinylation product functionalized with azide for click chemistry use, on a long (73 atoms) single molecular weight, discrete PEG (dPEG®) chain. This product enables biotinylation of molecules using either metal-catalyzed (CuAAC, RuAAC) or strain-promoted azide-alkyne cycloaddition (SPAAC) chemistry. Consequently, these products allow new types of biotinylated constructs.

Because Biotin-dPEG®23-azide is a single molecular weight dPEG® product, analysis of the resulting conjugates is simplified. The researcher using this product does not have to analyze a variety of PEG chain lengths and molecular weights. Instead, the well-defined dPEG® product will yield predictable, identifiable conjugates. When using Biotin-dPEG®23-azide with proteins or peptides engineered to contain alkyne side chains at specific locations, both the number and location of conjugation sites are predictable.

Biotin-dPEG®23-azide has numerous uses. Through protein engineering, non-natural amino acids with alkyne side chains can be incorporated into distinct locations on proteins, thereby enabling site-specific, reproducible biotinylation of proteins. Likewise, synthetic peptides can be constructed that allow azide-alkyne click chemistry-driven biotinylation of the peptides. Also, surfaces functionalized with alkyne groups can be biotinylated using click chemistry. Furthermore, this product can be modified with other products from Vector Laboratories to create new compounds tailored to the customer’s specific needs. For example, in a 2018 study published in the journal Langmuir, researchers from The BioDesign Institute at Arizona State University used Biotin-dPEG®23-azide to construct a Y-shaped, bivalent, bis-biotin structure with a rigid core to probe the interaction of biotin and streptavidin using both atomic force microscopy (AFM) and surface plasmon resonance (SPR).

As a biotinylation reagent, Biotin-dPEG®23-azide functions like other biotinylation reagents. For example, pull-down assays, affinity purification, ELISA and other plate-type assays, and supramolecular construction can employ Biotin-dPEG®23-azide successfully. Many other applications using Biotin-dPEG®23-azide are possible.

For research use only. Not intended for animal or human therapeutic or diagnostic use.

www.vectorlabs.com
e: customerservice@vectorlabs.com
t: (650) 697-3600

Specifications

Unit Size	100mg, 1000mg
Molecular Weight	1325.60; single compound
Chemical formula	$C_{58}H_{112}N_6O_{25}S$
CAS	956494-20-5
Purity	> 98%
Spacers	dPEG® Spacer is 73 atoms and 87.7 Å
Shipping	Ambient
Typical solubility properties (for additional information contact Customer Support)	Methylene chloride, DMAC or DMSO.
Storage and handling	-20°C; Always let come to room temperature before opening; be careful to limit exposure to moisture and restore under an inert atmosphere; stock solutions can be prepared with dry solvent and kept for several days (freeze when not in use). dPEG® pegylation compounds are generally hygroscopic and should be treated as such. This will be less noticeable with liquids, but the solids will become tacky and difficult to manipulate, if care is not taken to minimize air exposure.